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AMENDMENT NO. \_\_\_\_\_

Calendar No. \_\_\_\_\_

Purpose: To improve the bill.

IN THE SENATE OF THE UNITED STATES—109th Cong., 1st Sess.

**H.R. 6**

To **AMENDMENT No. 0989** and

By Domenici

To: H.R. 6

Refs \_\_\_\_\_

19  
Page(s)

GPO: 2004 07-200(Mac)

AMENDMENT intended to be proposed by Mr. DOMENICI

Viz:

- 1 Or page 11, between lines 10 and 11, insert the fol-
- 2 lowing:
- 3 (O) Savannah River National Laboratory.
- 4 Or page 11, line 11, strike "(O)" and insert "(P)".
- 5 Or page 11, line 12, strike "(P)" and insert "(Q)".
- 6 Beginning on page 47, strike line 11 and all that fol-
- 7 lows through page 49, line 4, and insert the following:

1 **SEC. 127. STATE BUILDING ENERGY EFFICIENCY CODES IN-**  
2 **CENTIVES.**

3 Section 304(e) of the Energy Conservation and Pro-  
4 duction Act (42 U.S.C. 6833(e)) is amended—

5 (1) in paragraph (1), by inserting before the pe-  
6 riod at the end of the first sentence the following:  
7 “, including increasing and verifying compliance with  
8 such codes”; and

9 (2) by striking paragraph (2) and inserting the  
10 following:

11 “(2) Additional funding shall be provided under this  
12 subsection for implementation of a plan to achieve and  
13 document at least a 90 percent rate of compliance with  
14 residential and commercial building energy efficiency  
15 codes, based on energy performance—

16 “(A) to a State that has adopted and is imple-  
17 menting, on a statewide basis—

18 “(i) a residential building energy efficiency  
19 code that meets or exceeds the requirements of  
20 the 2004 International Energy Conservation  
21 Code, or any succeeding version of that code  
22 that has received an affirmative determination  
23 from the Secretary under subsection (a)(5)(A);  
24 and

25 “(ii) a commercial building energy effi-  
26 ciency code that meets or exceeds the require-

1           ments of the ASHRAE Standard 90.1–2004, or  
2           any succeeding version of that standard that  
3           has received an affirmative determination from  
4           the Secretary under subsection (b)(2)(A); or

5           “(B) in a State in which there is no statewide  
6           energy code either for residential buildings or for  
7           commercial buildings, to a local government that has  
8           adopted and is implementing residential and com-  
9           mercial building energy efficiency codes, as described  
10          in subparagraph (A).

11          “(3) Of the amounts made available under this sub-  
12         section, the Secretary may use \$500,000 for each fiscal  
13         year to train State and local officials to implement codes  
14         described in paragraph (2).

15          “(4)(A) There are authorized to be appropriated to  
16         carry out this subsection—

17                 “(i) \$25,000,000 for each of fiscal years 2006  
18                 through 2010; and

19                 “(ii) such sums as are necessary for fiscal year  
20                 2011 and each fiscal year thereafter.

21          “(B) Funding provided to States under paragraph  
22         (2) for each fiscal year shall not exceed  $\frac{1}{2}$  of the excess  
23         of funding under this subsection over \$5,000,000 for the  
24         fiscal year.”.

1 On page 76, lines 9 and 10, strike "January 1, 2006"  
2 and insert "January 1, 2007".

3 On page 234, strike lines 23 through 25, and insert  
4 the following:

5 (20) by striking "section 104(b) of the Naval  
6 Petroleum Reserves Production Act of 1976 (90  
7 Stat. 304; 42 U.S.C. 6504)" and inserting "section  
8 104(a)"; and

9 On page 296, after line 25, add the following:

10 **SEC. 347. FINGER LAKES WITHDRAWAL.**

11 All Federal land within the boundary of Finger Lakes  
12 National Forest in the State of New York is withdrawn  
13 from—

14 (1) all forms of entry, appropriation, or disposal  
15 under the public land laws; and

16 (2) disposition under all laws relating to oil and  
17 gas leasing.

18 On page 321, line 18, insert "by the Commission"  
19 after "request".

20 On page 353, strike lines 19 through 24 and insert  
21 the following:

1 on Indian land;

2 “(C) provide low-interest loans to Indian  
3 tribes and tribal energy resource development  
4 organizations for use in the promotion of en-  
5 ergy resource development on Indian land and  
6 integration of energy resources; and

7 “(D) provide grants and technical assist-  
8 ance to an appropriate tribal environmental or-  
9 ganization, as determined by the Secretary, that  
10 represents multiple Indian tribes to establish a  
11 national resource center to develop tribal capac-  
12 ity to establish and carry out tribal environ-  
13 mental programs in support of energy-related  
14 programs and activities under this title,  
15 including--

16 “(i) training programs for tribal envi-  
17 ronmental officials, program managers,  
18 and other governmental representatives;

19 “(ii) the development of model envi-  
20 ronmental policies and tribal laws, includ-  
21 ing tribal environmental review codes, and  
22 the creation and maintenance of a clear-  
23 inghouse of best environmental manage-  
24 ment practices; and

1                   “(iii) recommended standards for re-  
2                   viewing the implementation of tribal envi-  
3                   ronmental laws and policies within tribal  
4                   judicial or other tribal appeals systems.

5           On page 356, between lines 15 and 16, insert the fol-  
6   lowing:

7                   “(C) In providing a grant under this subsection  
8                   for an activity to provide, or expand the provision of,  
9                   electricity on Indian land, the Director shall encour-  
10                  age cooperative arrangements between Indian tribes  
11                  and utilities that provide service to Indian tribes, as  
12                  the Director determines to be appropriate.

13           On page 357, line 6, insert “(A)” after “(2)”.

14           On page 357, between lines 16 and 17, insert the fol-  
15   lowing:

16                  “(B) In providing a loan guarantee under this  
17                  subsection for an activity to provide, or expand the  
18                  provision of, electricity on Indian land, the Secretary  
19                  of Energy shall encourage cooperative arrangements  
20                  between Indian tribes and utilities that provide serv-  
21                  ice to Indian tribes, as the Secretary determines to  
22                  be appropriate.

1 On page 488, strike lines 5 through 9 and insert the  
2 following:

3 (a) DEFINITION OF LIGNOCELLULOSIC FEED-  
4 STOCK.—In this section, the term “lignocellulosic feed-  
5 stock” means any portion of a plant or coproduct from  
6 conversion, including crops, trees, and agricultural and  
7 forest residues not specifically grown for food.

8 On page 489, line 3, strike “cellulosic feedstocks”  
9 and insert “lignocellulosic feedstocks”.

10 On page 489, lines 11 and 12, strike “cellulosic feed-  
11 stocks” and insert “lignocellulosic feedstocks”.

12 On page 503, strike lines 22 through 24.

13 On page 504, line 1, strike “(2)” and insert “(1)”.

14 On page 504, strike lines 4 through 7 and insert the  
15 following:

16 (2) For activities under section 955—

17 (A) \$337,000,000 for fiscal year 2006;

18 (B) \$364,000,000 for fiscal year 2007; and

19 (C) \$394,000,000 for fiscal year 2008.

20 (3) For activities under section 956—

- 1 (A) \$20,000,000 for fiscal year 2006;  
2 (B) \$25,000,000 for fiscal year 2007; and  
3 (C) \$30,000,000 for fiscal year 2008.

4 On page 504, line 24, strike "(b)(2)" and insert  
5 "(b)(1)".

6 Beginning on page 505, strike lines 17 and all that  
7 follows through page 506, line 2.

8 On page 506, line 3, strike "(c)" and insert "(b)".

9 On page 506, line 11, strike "(d)" and insert "(c)".

10 Beginning on page 519, strike line 9 and all that fol-  
11 lows through page 523, line 6, and insert the following:  
12 **SEC. 955. COAL AND RELATED TECHNOLOGIES PROGRAM.**

13 (a) IN GENERAL.—In addition to the programs au-  
14 thorized under title IV, the Secretary shall conduct a pro-  
15 gram of technology research, development, and demonstra-  
16 tion and commercial application for coal and power sys-  
17 tems, including programs to facilitate production and gen-  
18 eration of coal-based power through—

- 19 (1) innovations for existing plants (including  
20 mercury removal);



- 1 (2) gasification systems;
- 2 (3) advanced combustion systems;
- 3 (4) turbines for synthesis gas derived from coal;
- 4 (5) carbon capture and sequestration research
- 5 and development;
- 6 (6) coal-derived chemicals and transportation
- 7 fuels;
- 8 (7) liquid fuels derived from low rank coal
- 9 water;
- 10 (8) solid fuels and feedstocks;
- 11 (9) advanced coal-related research;
- 12 (10) advanced separation technologies; and
- 13 (11) fuel cells for the operation of synthesis gas
- 14 derived from coal.

15 (b) COST AND PERFORMANCE GOALS.—

16 (1) IN GENERAL.—In carrying out programs  
17 authorized by this section, the Secretary shall iden-  
18 tify cost and performance goals for coal-based tech-  
19 nologies that would permit the continued cost-com-  
20 petitive use of coal for the production of electricity,  
21 chemical feedstocks, and transportation fuels in  
22 2008, 2010, 2012, and 2016, and each calendar  
23 year beginning after September 30, 2021.

24 (2) ADMINISTRATION.—In establishing the cost  
25 and performance goals, the Secretary shall—

1 (A) consider activities and studies under-  
2 taken as of the date of enactment of this Act  
3 by industry in cooperation with the Department  
4 in support of the identification of the goals;

5 (B) consult with interested entities,  
6 including--

7 (i) coal producers;

8 (ii) industries using coal;

9 (iii) organizations that promote coal  
10 and advanced coal technologies;

11 (iv) environmental organizations;

12 (v) organizations representing work-  
13 ers; and

14 (vi) organizations representing con-  
15 sumers;

16 (C) not later than 120 days after the date  
17 of enactment of this Act, publish in the Federal  
18 Register proposed draft cost and performance  
19 goals for public comments; and

20 (D) not later than 180 days after the date  
21 of enactment of this Act and every 4 years  
22 thereafter, submit to Congress a report describ-  
23 ing the final cost and performance goals for the  
24 technologies that includes—

25 (i) a list of technical milestones; and

1                   (ii) an explanation of how programs  
2                   authorized in this section will not duplicate  
3                   the activities authorized under the Clean  
4                   Coal Power Initiative authorized under  
5                   title IV.

6           (e) **POWDER RIVER BASIN AND FORT UNION LIG-**  
7 **NITE COAL MERCURY REMOVAL.—**

8           (1) **IN GENERAL.—**In addition to the programs  
9           authorized by subsection (a), the Secretary may es-  
10           tablish a program to test and develop technologies to  
11           control and remove mercury emissions from subbitu-  
12           minous coal mined in the Powder River Basin, and  
13           Fort Union lignite coals, that are used for the gen-  
14           eration of electricity.

15           (2) **EFFICACY OF MERCURY REMOVAL TECH-**  
16 **NOLOGY.—**In carrying out the program under para-  
17           graph (1), the Secretary shall examine the efficacy  
18           of mercury removal technologies on coals described  
19           in that paragraph that are blended with other types  
20           of coal.

21 **SEC. 956. CARBON CAPTURE RESEARCH AND DEVELOP-**  
22 **MENT PROGRAM.**

23           (e) **IN GENERAL.—**The Secretary shall carry out a  
24 10-year carbon capture research and development pro-

1 gram to develop carbon dioxide capture technologies on  
2 combustion-based systems for use—

3 (1) in new coal utilization facilities; and

4 (2) on the fleet of coal-based units in existence  
5 on the date of enactment of this Act.

6 (b) OBJECTIVES.—The objectives of the program  
7 under subsection (a) shall be—

8 (1) to develop carbon dioxide capture tech-  
9 nologies, including adsorption and absorption tech-  
10 niques and chemical processes, to remove the carbon  
11 dioxide from gas streams containing carbon dioxide  
12 potentially amenable to sequestration;

13 (2) to develop technologies that would directly  
14 produce concentrated streams of carbon dioxide po-  
15 tentially amenable to sequestration;

16 (3) to increase the efficiency of the overall sys-  
17 tem to reduce the quantity of carbon dioxide emis-  
18 sions released from the system per megawatt gen-  
19 erated; and

20 (4) in accordance with the carbon dioxide cap-  
21 ture program, to promote a robust carbon sequestra-  
22 tion program and continue the work of the Depart-  
23 ment, in conjunction with the private sector, through  
24 regional carbon sequestration partnerships.

1       On page 522, between lines 8 and 9, insert the fol-  
2       lowing:

3       (d. FUEL CELLS.—

4             (1) IN GENERAL.—The Secretary shall conduct  
5       a program of research, development, demonstration,  
6       and commercial application on fuel cells for low-cost,  
7       high-efficiency, fuel-flexible, modular power systems.

8             (2) DEMONSTRATIONS.—The demonstrations  
9       referred to in paragraph (1) shall include solid oxide  
10      fuel cell technology for commercial, residential, and  
11      transportation applications, and distributed genera-  
12      tion systems, using improved manufacturing produc-  
13      tion and processes.

14      On page 558, beginning on line 22, strike “of the  
15      Senate” and all that follows through “Commerce” on line  
16      23 and insert “and the Committee on Foreign Relations  
17      of the Senate and the Committee on Energy and Com-  
18      merce and the Committee on International Relations”.

19      On page 595, between lines 4 and 5, insert the fol-  
20      lowing:

21             (2) REPORT ON TRENDS.—Not later than 1  
22      year after the date of enactment of this Act, the  
23      Secretary shall submit to Congress a report on cur-

1       rent trends under paragraph (1), with recommenda-  
2       tions (as appropriate) to meet the future labor re-  
3       quirements for the energy technology industries.

4       On page 595, line 5, strike “(2) REPORT.—As” and  
5       insert the following:

6               (3) REPORT ON SHORTAGE.—As

7       On page 596, strike line 22 and all that follows  
8       through page 597, line 20, and insert the following:

9       **SEC. 1103. EDUCATIONAL PROGRAMS IN SCIENCE AND**  
10               **MATHEMATICS.**

11       (a) SCIENCE EDUCATION ENHANCEMENT FUND.—  
12       Section 3164 of the Department of Energy Science Edu-  
13       cation Enhancement Act (42 U.S.C. 7381a) is amended  
14       by adding at the end:

15               “(e) SCIENCE EDUCATION ENHANCEMENT FUND.—  
16       The Secretary shall use not less than 0.2 percent of the  
17       amount made available to the Department for fiscal year  
18       2006 and each fiscal year thereafter to carry out activities  
19       authorized by this part.”.

20       (b) AUTHORIZED EDUCATION ACTIVITIES.—Section  
21       3165 of the Department of Energy Science Education En-  
22       hancement Act (42 U.S.C. 7381b) is amended by adding  
23       at the end the following:

1           “(14) Support competitive events for students  
2 under the supervision of teachers, designed to en-  
3 courage student interest and knowledge in science  
4 and mathematics.

5           “(15) Support competitively-awarded, peer-re-  
6 viewed programs to promote professional develop-  
7 ment for mathematics teachers and science teachers  
8 who teach in grades from kindergarten through  
9 grade 12 at Department research and development  
10 facilities.

11           “(16) Support summer internships at Depart-  
12 ment research and development facilities, for mathe-  
13 matics teachers and science teachers who teach in  
14 grades from kindergarten through grade 12.

15           “(17) Sponsor and assist in educational and  
16 training activities identified as critical skills needs  
17 for future workforce development at Department re-  
18 search and development facilities.”.

19           (c) EDUCATIONAL PARTNERSHIPS.—Section 3166(b)  
20 of the Department of Energy Science Education Enhance-  
21 ment Act (42 U.S.C. 7381e(b)) is amended—

22           (1) by striking paragraph (1) and inserting the  
23 following:

24           “(1) loaning or transferring equipment to the  
25 institution;”;

1           (2) in paragraph (5), by striking “and” at the  
2           end;

3           (3) in paragraph (6), by striking the period at  
4           the end and inserting “; and”; and

5           (4) by adding at the end the following:

6           “(7) providing funds to educational institutions  
7           to hire personnel to facilitate interactions between  
8           local school systems, Department research and devel-  
9           opment facilities, and corporate and governmental  
10          entities.”.

11          (d) DEFINITION OF DEPARTMENT RESEARCH AND  
12          DEVELOPMENT FACILITIES.—Section 3167(3) of the De-  
13          partment of Energy Science Education Enhancement Act  
14          (42 U.S.C. 7381d(3)) is amended by striking “from the  
15          Office of Science of the Department of Energy” and in-  
16          serting “by the Department of Energy”.

17          (c) STUDY.—

18                (1) IN GENERAL.—The Secretary shall enter  
19                into an arrangement with the National Academy of  
20                Public Administration to conduct a study of the pri-  
21                orities, quality, local and regional flexibility, and  
22                plans for educational programs at Department re-  
23                search and development facilities.

24                (2) INCLUSION.—The study shall recommend  
25                measures that the Secretary may take to improve



1 Department-wide coordination of educational, work-  
2 force development, and critical skills development ac-  
3 tivities.

4 (3) REPORT.—Not later than 2 years after the  
5 date of enactment of this Act, the Secretary shall  
6 submit to Congress a report on the results of the  
7 study conducted under this subsection.

8 On page 599, line 15, insert “(as amended by section  
9 1103(a))” after “7381a”).

10 On page 599, line 17, strike “(e)” and insert “(d)”.

11 On page 686, line 3, insert “by the Commission”  
12 after “request”.

13 On page 755, after line 25, add the following:

14 **SEC. 13. STUDY OF LINK BETWEEN ENERGY SECURITY**  
15 **AND INCREASES IN VEHICLE MILES TRAV-**  
16 **ELED.**

17 (a) IN GENERAL.—The Secretary shall enter into an  
18 arrangement with the National Academy of Sciences  
19 under which the Academy shall conduct a study to assess  
20 the implications on energy use and efficiency of land devel-  
21 opment patterns in the United States.

- 1 (b) SCOPE.—The study shall consider—
- 2 (1) the correlation, if any, between land devel-
- 3 opment patterns and increases in vehicle miles trav-
- 4 eled;
- 5 (2) whether petroleum use in the transportation
- 6 sector can be reduced through changes in the design
- 7 of development patterns;
- 8 (3) the potential benefits of—
- 9 (A) information and education programs
- 10 for State and local officials (including planning
- 11 officials) on the potential for energy savings
- 12 through planning, design, development, and in-
- 13 frastructure decisions;
- 14 (B) incorporation of location efficiency
- 15 models in transportation infrastructure plan-
- 16 ning and investments; and
- 17 (C) transportation policies and strategies
- 18 to help transportation planners manage the de-
- 19 mand for the number and length of vehicle
- 20 trips, including trips that increase the viability
- 21 of other means of travel; and
- 22 (4) such other considerations relating to the
- 23 study topic as the National Academy of Sciences
- 24 finds appropriate.

1 (c) REPORT.—Not later than 2 years after the date  
2 of enactment of this Act, the National Academy of  
3 Sciences shall submit to the Secretary and Congress a re-  
4 port on the study conducted under this section.

5 **SEC. 13 \_\_\_\_ STUDY OF AVAILABILITY OF SKILLED WORK-**  
6 **ERS.**

7 (a) IN GENERAL.—The Secretary shall enter into an  
8 arrangement with the National Academy of Sciences  
9 under which the National Academy of Sciences shall con-  
10 duct a study of the short-term and long-term availability  
11 of skilled workers to meet the energy and mineral security  
12 requirements of the United States.

13 (b) INCLUSIONS.—The study shall include an analysis  
14 of—

15 (1) the need for and availability of workers for  
16 the oil, gas, and mineral industries;

17 (2) the availability of skilled labor at both entry  
18 level and more senior levels; and

19 (3) recommendations for future actions needed  
20 to meet future labor requirements.

21 (c) REPORT.—Not later than 2 years after the date  
22 of enactment of this Act, the Secretary shall submit to  
23 Congress a report that describes the results of the study.